UNIVERSITY OF CALIFORNIA.

AGRICULTURAL EXPERIMENT STATION.

BULLETIN NO. 50.

Distribution of Plants and Scions.

The following kinds of plants and scions of proven or probable economic value in this State, will be available for distribution from the University during the present season. Plants will not, as a rule, be ready for sending out until on or about February 1st, while scions may if desired, be sent as pruning progresses. Applications should be made at once, and will be filled in the order in which they have been received, omitting, however, such plants as are known to be unadapted to the climate of the locality concerned. Since, moreover, the object of the distribution is to test the adaption of the plants in as many localities as possible, numerous applications from one and the same locality cannot be filled unless a surplus remains after those from different sections have been supplied.

Plants will be forwarded by express, scions by mail (unless specially otherwise requested), in lots consisting of the number hereinafter mentioned for each kind, on remittance of 25 cents for each lot of plants, and 10 cents additional for each additional lot, to pay expenses of packing, etc. For scions send ten cents for each dozen ordered. Postal notes, payable at the Berkeley postoffice, are requested to be sent in lieu of stamps whenever practicable. Any surplus left after filling orders as far as possible will be returned to the senders, deducting letter postage.

Plants.

Esparto grass, *Stipa tenacissima*, the grass so extensively used in the Mediterranean countries for cordage, baskets, etc., and lately exported in large quantities as a material for paper making. It grows naturally on sandy beaches, within reach of salt water, but will doubtless be found adapted to many saline and alkaline lands now unreclaimed or occupied by the common tule. It should be thoroughly tested in sandy coast lands southward of the bay, and in South California, ten plants (2 large and 8 small) to each lot.

Black Wattle of Australia—(*Acacia decurrens*). A rapid growing beautiful acacia, with feathery leaves, and valuable for its bark ("Mimosa bark"), which is highly prized as a tanning material. (See report of the College of Agriculture, for 1882, p. 109). The Black Wattle is best adapted to sandy lands. It should be understood that the tree is only transplanted successfully when small. Our stock is better and stronger than that offered two years ago. A quantity of seed still remains undistributed, and can be had on application. Lots of 10 plants.

Pistachio Nut—(*Pistacia vera*). A number of seedlings of this tree, which is as yet comparatively rare in California, though manifestly adapted to a large part of the State, have been grown from seed imported last year. The Pistachio is naturally a slow grower, and will not become more than a small tree at best. Although small, these trees should be set out whereever they are to remain, as they are difficult to transplant when once rooted, owing to the nature of the deep-going roots. As the plants are small they, of course, need tender handling at first. Lots of 5 plants.

The Carob tree, *Ceratonia Siliqua*, the true "Algaroba" or St. John's bread of the Mediterranean region, has been heretofore recommended for cultivation in the southern part of the State, on dry and otherwise unavailable hillsides, as well as in richer and moister lands, for the production of an excellent milk-producing feed. (See report Coll. of Agr. of 1884, page 100). The Carob is about as hardy as the orange, but owing to its drouth resisting qualities when once established, is destined to have a much wider range than that tree. Four plants to each, it being necessary to make sure of having both staminate and pistillate trees together.

European or English oak—(*Quercus robur.*) Last season several thousands of acorns of this useful timber tree were distributed throughout the State. Unlike the American oaks, when transplanted to the climate of California this tree proves to be a rapid grower, unexpectedly resistant of drouth, and promises well as the hardwood timber tree of the future on the Pacific Coast. It is not choice as to soil and location, and would probably do well both on the mountains and in the plains, where the latter are not too dry. Its success should be extensively tested. Six plants to each.

The *New Zealand Flax*, so useful to gardeners and vineyardists for the purpose of tying with the ribbons into which the leaves readily split, and which are exceedingly strong, is again offered for distribution. Reports received from the interior of the State point strongly to the conclusion that the plant is unadapted to the hot interior valleys. From all coast regions the reports are good. Although fond of moisture, it is not a marsh plant and will not succeed in a swamp. Six plants to the lot.

The *Ramie*, the so-called Chinese grass, of which the cheap preparation for textile purposes by machinery seems now to be in the way of accomplishment, should be more extensively tested. It succeeds exceedingly well at Berkeley, in heavy adobe, and is known to do well on sandy soils. Late reports prove that the plant is well adapted to the greater part of the State, and that it will succeed in a great variety

of soils. Six plants to each.

Australian Salt Bush(*Atriplex nummularia*), a forage plant adapted to salty and alkali soils (see Rep. for 1882, p. 117), belonging to the Lamb's quarter group of plants, is much liked by cows. We have very conflicting reports as to the usefulness of the bush as a fodder, some praising it highly, others not being satisfied with it. Ten plants to each lot.

Caper plant—(*Capparis spinosa*, variety *inermis*). The thornless caper seems to succeed well, even at Berkeley, and would doubtless do much better in warm locations where it would not be cut down by frosts. It bears abundantly, and as a small industry, to be carried on by children, its cultivation would doubtless pay.

Coffee tree—(*Coffea arabica*). To experiment with this tender plant will be useless for any but those situated in the most favored localities as regards exemption from frost. It will only succeed where the frosts are very slight and of short duration; such as the tomato will endure. We think that such localities may be found in the extreme southern counties. The plants were grown from seed imported from one of the mountain plantations in Guatemala. Five plants to each.

Resistant stocks.—A limited number of rooted cuttings of *Vitis Arizonica* are offered for trial as resistant stocks in vineyards infested by the phylloxera. Five plants to each.

Cuttings and Scions.

Cuttings of the *Huasco grape*, from Chili, producing the splendid raisins exported from that country. This grape has ripened in different parts of the State, on grafts distributed by this institution. It seems in many respects to be identical with the Muscat of Alexandria, but has fewer seeds and a more robust habit of growth.

Scions of the following named varieties may be had on application, as stated above.

Pears.

Our collection of pears is very good, and the quality of many of our winter fruits, especially, excellent; but the presence of the summer fogs has the tendency to give them a russet surface —a tendency being more and more pronounced every year. Hence, they have never attracted a great deal of attention at the various fairs where they have been shown. A different climate will change this the first season. As regards the pear fungus (or scab), so severe last season, it has this year done but little damage here, as in other localities; but we record the remarkable case of several varieties exempt last year, but badly infested this season. It shows, therefore, that none are entirely to be trusted.

We give the time of ripening of this locality, which, compared with the greater part of the State, is very late. Those starred (*) have proved exempt, or nearly so, every year since fruiting here:

Anne Ogereau; very handsome pear; beginning of August.

Ott; middle of August, before Seckel; small, but delicious.

Duchesse Precoce; above medium; a steady bearer, fair quality; end of July.

*Doyenne Robin; medium to large; beginning of September; good bearer; fair quality; excelent keeper.

Dr. Reeder, tasted here for the first time this season; small, but of the highest quality; end of September, beginning of Oct., after Seckel.

*Paradise d' Autumne; September and October; medium size; very good.

*Marie Louise d' Uccles; end of September; small grower, but a large and constant bearer; fruit large, good quality.

*Sheldon; large; end of September; good.

*Conseiller de la Cour; large; regular bearer; good; middle of October.

*Jalousie Fontenay Vendee; medium; good bearer, resembles in taste Beurre gris, of Europe.

*Citmastons Duchesse d'Angouleme; a pear, entirely different from the ordinary Duchesse; is later, large to very large; so far a shy bearer; good.

*Baronne de Mello; medium; regular bearer; November; good.

Augustus Dana; large; November; very good; so far a shy bearer.

*Beurre gris d'hiver nouveau (new gray winter pear); a variety, we are told, which was formerly cultivated considerably in Santa Clara, but now not met with; large to very large; tree a good regular bearer; quality very good; November and December.

*Md. Lariol de Barny; large, good bearer; good (resembles Emil d'Heyst).

*Jaminette; above medium size; November and December; excellent keeper; good (extremely sweet).

Fondante de Noel; above medium; very handsome; December; good.

*Jones Seedling; small; a good steady bearer; October; good.

Duhamel de monceau; December; above medium; very good; tree a poor grower.

Plums.

Black Morocco; small blue plum; the earliest we have.

Ontario; the best early plum we have; green; above medium; quality fair.

Wangenheim Prune; resembles the true German prune closely, but bears steadily here while the latter does not.

Apricots.

Blenheim, Alberge De Montagamet, Purple, Kaisha, Canino Grosso, De Coulorge, and "Beauge," improperly so named, (a handsome, highly colored, oval clingstone of medium size and good quality) are among the less known varieties worthy of trial in the State, and of which scions can be sent.

Address applications to E. W. HILGARD, *University of California, Berkeley, Cal., Dec. 29, 1885.*